

Basis of Design

This section applies to the design and installation of both asphalt and concrete pavements.

Background

- Fire Apparatus Access Fire service is provided to the University by the Seattle Fire Department. Emergency access roads should conform to the Seattle Fire Code Article 9, SFD Administrative Rules, and referenced standards. The Fire Code allows the Chief to reduce emergency access to fully sprinkler protected facilities provided at least one side of a building is provided with a fire lane.
- See drawing 901RU-02 for University Campus Map Fire Lanes and Fire Hydrants.

Design Criteria

- Vehicular PCC paving shall be used in service areas, loading docks, and access roads leading to loading docks, and shall have a minimum thickness of 8 inches over 2 inches of Crushed Surfacing Top Course. Additional pavement section may be needed as a result of the traffic and wheel loading study.
- Vehicular PCC paving shall be used on roadways that have bus traffic and shall be a minimum of 10 inches thick over 2 inches of Crushed Surfacing Top Course. Additional pavement section may be needed as the result of the traffic and wheel load study.
- Vehicular Asphalt paving shall be a minimum of 3 inches of Asphalt Concrete Class B over 4 inches if Crushed Surfacing Top Course. Additional pavement section may be needed as the result of the traffic and wheel load study.
- Vehicular PCC and Asphalt paving shall meet latest requirements of Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT).
- Crosswalks in concrete pavement shall have lamp black added.

Design Evaluation

The following information is required to evaluate the design:

- Design Development Phase: Show road locations. Show cross section of roadways. Provide preliminary specifications for all paving materials.
- Construction Document Phase: Details and specifications.

Construction Submittals

- Pavement mix design
- Plan of pavement joints

Related Sections

- None

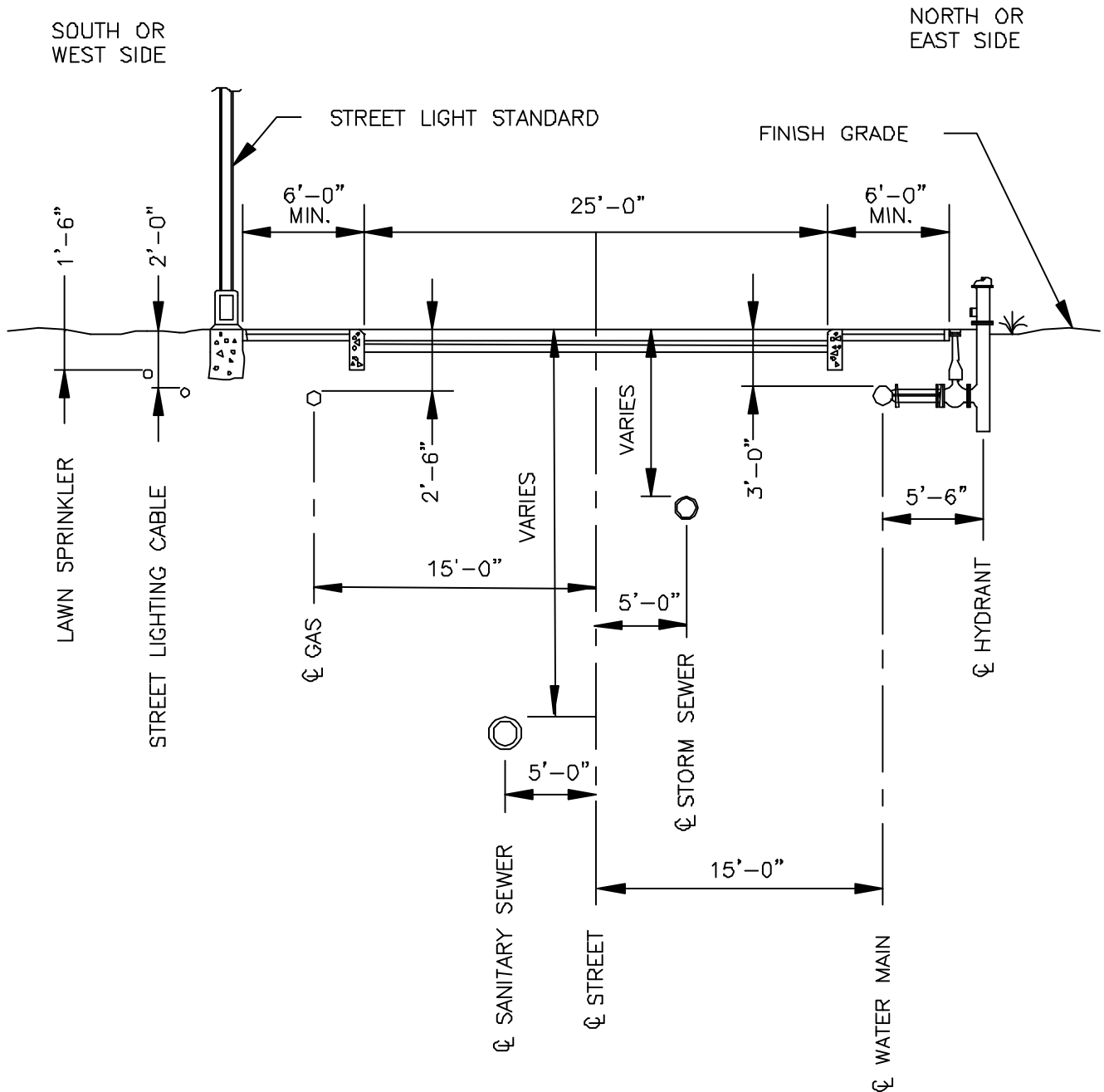
Products, Material and Equipment

- Provide a flexural strength of a least 650 psi at 28 days for concrete for vehicular PCC paving. Use high-early cement when it is necessary to open the area to traffic after seven days of curing.
- Provide concrete for PCC paving with a silica fume additive when (a) the slope of the paving exceeds a 6 percent grade or (b) within 60 feet of a stop sign.
- Asphalt concrete pavement shall meet the Class B standards as defined in the WSDOT latest specification.
- Use air-entrained concrete.

Installation, Fabrication and Construction

- The University of Washington shall retain a testing lab to monitor and test all rock, concrete and asphalt samples and check the density of the subgrade before placing the surfacing materials.
- The specifications shall call for testing of the concrete for vehicular paving to be in accordance with ASTM C 78 Standard Testing Method for Flexural Strength of Concrete (using a simple beam with third point loading)
- Vibrate all concrete with a 2-inch (minimum) stinger.
- After edging, apply a medium broom finish transversely to vehicular PCC paving.
- Saw cut joints as soon as possible (approximately 8 to 10 hours after pouring).
- Cure vehicular PCC pavement with water only.
- Supply a back-up sprinkler system if the evaporation rate exceeds the rate shown in the specification.
- Place asphalt pavement when the air temperature is above 50° F and the sub grade is compact density in excess of 95% modified proctor.
- See Roadway & Utility Corridor Arrangement drawing.
- See Road Superelevation Typical drawing.
- See Removable Bollard drawing.
- See Fixed Bollard drawing.
- For long sections of vehicular PCC paving, a test sample showing final surface texture shall be made available at the site prior to initial pour. University Staff shall inspect the test sample. The Construction Coordinator shall make inspection arrangements with the Contractor and University Staff.

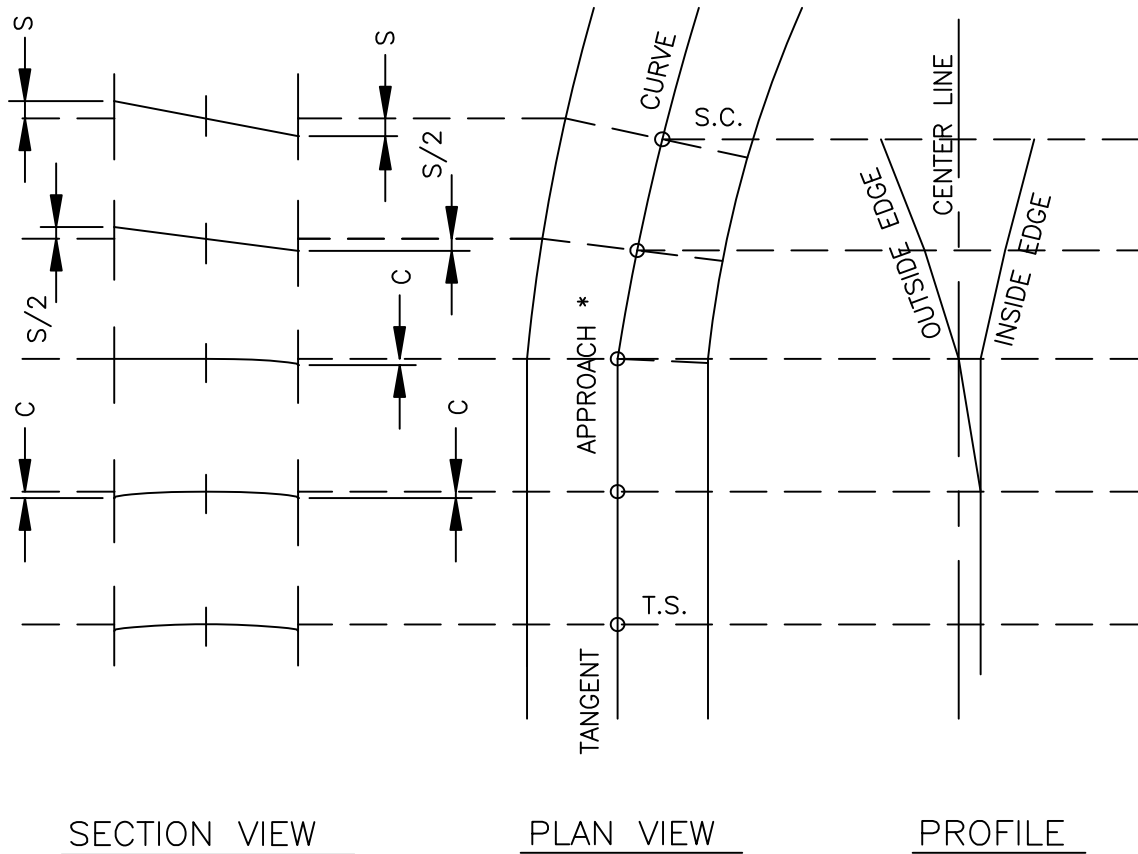
END OF DESIGN GUIDE SECTION



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Roadway and Utility Corridor Arrangement

ROADWAY

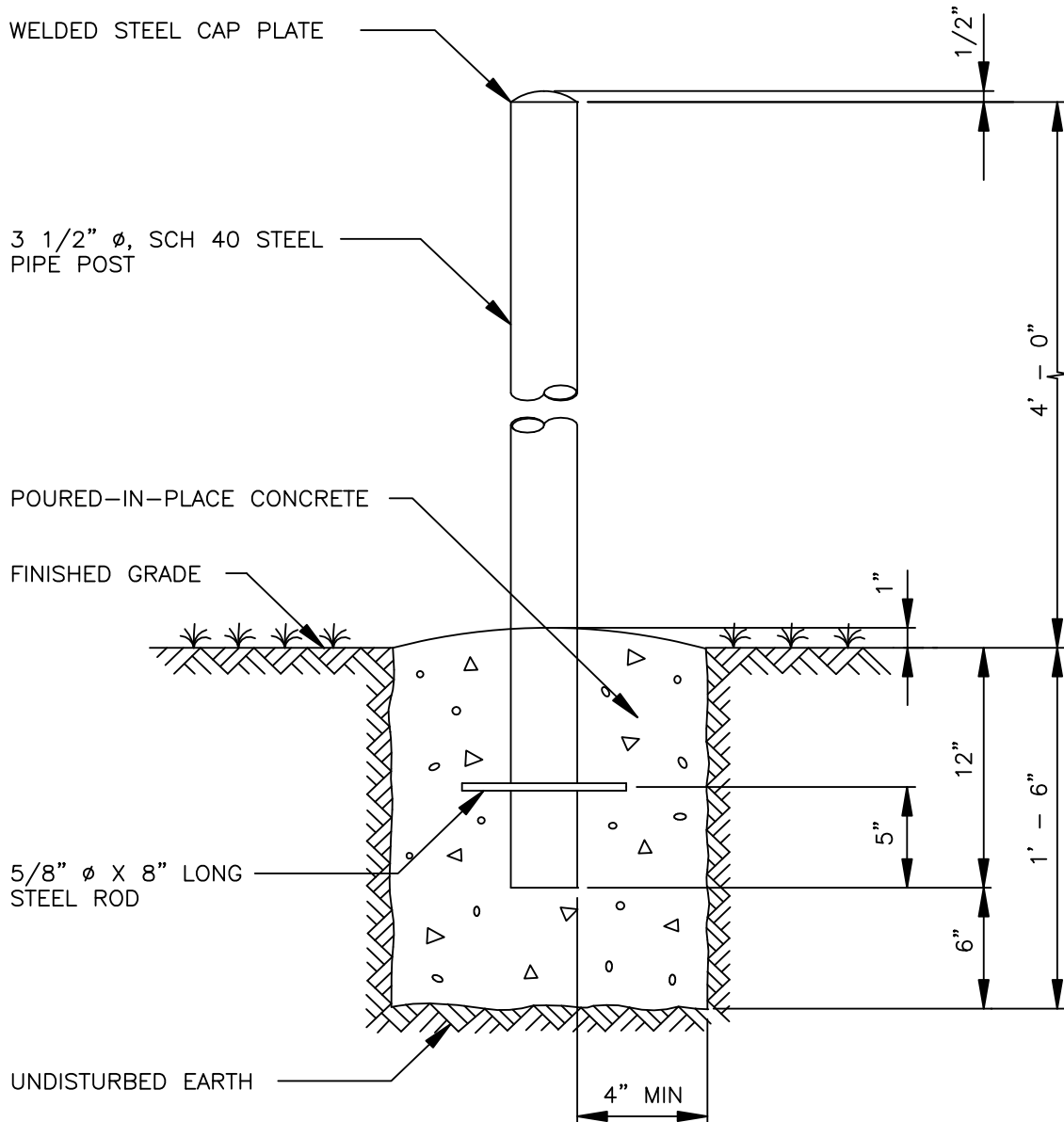


NOTES :

1. *SPIRAL OR TANGENT – MIN. 150' IN LENGTH
 APPROACH SHOWN, EXIT SIMILAR.
2. FAIR ALL ANGULAR BREAKS WITH VERTICAL CURVES.
3. C = CROWN AT 0.02 PER FOOT.
4. S = SUPER ELEVATION AT 0.08 PER FOOT.

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Roadway Super-Elevation Typical



NOTES :

1. MINIMUM ULTIMATE 28 DAY COMPRESSIVE STRENGTH OF CONCRETE 2,500 PSI
2. HOT-DIP GALVANIZE AFTER FABRICATON TO CONFORM WITH ASTM A123
3. BOLLARD TO BE PAINTED "TRAFFIC YELLOW" COLOR EXTERIOR ENAMEL

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Fixed Bollard